

SEQUENCE LISTING

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<120> Method of Producing and Purifying Endostatin Protein

<130> 05213-0551US (43170-258385)

<140> US 10/070,560

<141> 2002-03-08

<150> 60/153,698

<151> 1999-09-14

<150> PCT/US00/25166

<151> 2000-09-14

<160> 12

<170> PatentIn version 3.1

<210> 1

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 1
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<210> 2

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 2
atcgtctaga gcatccaggc ggtggctact

30

<210> 3

<211> 183

<212> PRT

<213> Homo sapiens

<400> 3

His Ser His Arg Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn
 1 5 10 15

Ser Pro Leu Ser Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln
 20 25 30

Cys Phe Gln Gln Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala
 35 40 45

Phe Leu Ser Ser Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala
 50 55 60

Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe
 65 70 75 80

Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro
 85 90 95

Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro
 100 105 110

Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg
 115 120 125

Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser
 130 135 140

Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln
 145 150 155 160

Ser Ala Ala Ser Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn
 165 170 175

Ser Phe Met Thr Ala Ser Lys
 180

<210> 4

<211> 549

<212> DNA

<213> Homo sapiens

<400> 4

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gggctggcgg gcaccttccg cgccttcttg ttctcgcgcc tgcaggacct gtacagcatc    180
gtgcgccgtg ccgaccgcg cagccgtgccc atcgtcaacc tcaaggacga gctgctgttt    240
cccagctggg aggtctgttt ctgaggctct gaggggtccg tgaagcccg ggcacgcac      300
ttctcctttg acggcaagga cgtcctgagg caccacacct ggcccagaa gagcgtgtgg    360
catggctcgg accccaacgg gcgcaggctg accgagagct actgtgagac gtggcggacg    420
gaggctccct cggccacggg ccaggcctcc tcgctgctgg ggggcaggct cctggggcag    480
agtgccgcga gctgccatca cgcctacatc gtgctctgca ttgagaacag cttcatgact    540
gcctccaag                                     549

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<210> 5

<211> 182

<212> PRT

<213> Homo sapiens

<400> 5

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His Ser His Arg Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn
1          5          10          15

Ser Pro Leu Ser Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln
          20          25          30

Cys Phe Gln Gln Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala
          35          40          45

Phe Leu Ser Ser Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala
          50          55          60

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Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe
 65 70 75 80

Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro
 85 90 95

Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro
 100 105 110

Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg
 115 120 125

Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser
 130 135 140

Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln
 145 150 155 160

Ser Ala Ala Ser Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn
 165 170 175

Ser Phe Met Thr Ala Ser
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<210> 6

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<212> PRT

<213> Homo sapiens

<400> 6

His Ser His Arg Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn
 1 5 10 15

Ser Pro Leu Ser Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln
 20 25 30

Cys Phe Gln Gln Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala
 35 40 45

Phe Leu Ser Ser Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala
 50 55 60

Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe
 65 70 75 80

Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro
 85 90 95

Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro
 100 105 110

Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg
 115 120 125

Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser
 130 135 140

Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln
 145 150 155 160

Ser Ala Ala Ser Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn
 165 170 175

Ser Phe Met Thr Ala
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<210> 7

<211> 180

<212> PRT

<213> Homo sapiens

<400> 7

His Ser His Arg Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn
 1 5 10 15

Ser Pro Leu Ser Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln
 20 25 30

Cys Phe Gln Gln Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala
 35 40 45

Phe Leu Ser Ser Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala
 50 55 60

Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe
 65 70 75 80

Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro
 85 90 95

Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro
 100 105 110

Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg
 115 120 125

Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser
 130 135 140

Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln
 145 150 155 160

Ser Ala Ala Ser Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn
 165 170 175

Ser Phe Met Thr
 180

<210> 8

<211> 179

<212> PRT

<213> Homo sapiens

<400> 8

Asp Phe Gln Pro Val Leu His Leu Val Ala Leu Asn Ser Pro Leu Ser
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Gly Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln Cys Phe Gln Gln
 20 25 30

Ala Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala Phe Leu Ser Ser
 35 40 45

Arg Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala Asp Arg Ala Ala
 50 55 60

Val Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe Pro Ser Trp Glu
 65 70 75 80

Ala Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro Gly Ala Arg Ile
 85 90 95

Phe Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro Thr Trp Pro Gln
 100 105 110

Lys Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg Arg Leu Thr Glu
 115 120 125

Ser Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser Ala Thr Gly Gln
 130 135 140

Ala Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln Ser Ala Ala Ser
 145 150 155 160

Cys His His Ala Tyr Ile Val Leu Cys Ile Glu Asn Ser Phe Met Thr
 165 170 175

Ala Ser Lys

<210> 9

<211> 33

<212> DNA

<213> Artificial Sequence

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<223> Synthetic primer

<400> 9

tctctcgaga aaagagactt ccagccggtg etc

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<210> 10

<211> 537

<212> DNA

<213> Homo sapiens

<400> 10

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accttccgcg ccttctgtc ctgcgcctg caggacctgt acagcatcgt gcgccgtgcc	180
gaccgcgcag ccgtgcccat cgtcaacctc aaggacgagc tgctgtttcc cagctgggag	240
gctctgttct caggctctga gggccgctg aagcccggg cagcatctt ctctttgac	300
ggcaaggacg tcctgaggca cccacctgg cccagaaga gcgtgtggca tggctcggac	360
cccaacgggc gcaggctgac cgagagctac tgtgagacgt ggcggacgga ggctccctcg	420
gccacgggcc aggcctctc gctgctgggg ggcaggctcc tggggcagag tgccgcgagc	480
tgccatcacg cctacatcgt gctctgcatt gagaacagct tcatgactgc ctccaag	537

<210> 11

<211> 178

<212> PRT

<213> Homo sapiens

<400> 11

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Gly	Gly	Met	Arg	Gly	Ile	Arg	Gly	Ala	Asp	Phe	Gln	Cys	Phe	Gln	Gln
			20					25					30		

Ala	Arg	Ala	Val	Gly	Leu	Ala	Gly	Thr	Phe	Arg	Ala	Phe	Leu	Ser	Ser
		35					40					45			

Arg	Leu	Gln	Asp	Leu	Tyr	Ser	Ile	Val	Arg	Arg	Ala	Asp	Arg	Ala	Ala
	50					55					60				

Val	Pro	Ile	Val	Asn	Leu	Lys	Asp	Glu	Leu	Leu	Phe	Pro	Ser	Trp	Glu
65					70					75					80

Ala	Leu	Phe	Ser	Gly	Ser	Glu	Gly	Pro	Leu	Lys	Pro	Gly	Ala	Arg	Ile
				85					90					95	

Phe	Ser	Phe	Asp	Gly	Lys	Asp	Val	Leu	Arg	His	Pro	Thr	Trp	Pro	Gln
			100					105					110		

Lys	Ser	Val	Trp	His	Gly	Ser	Asp	Pro	Asn	Gly	Arg	Arg	Leu	Thr	Glu
		115					120					125			

Ser	Tyr	Cys	Glu	Thr	Trp	Arg	Thr	Glu	Ala	Pro	Ser	Ala	Thr	Gly	Gln
	130					135					140				

Ala	Ser	Ser	Leu	Leu	Gly	Gly	Arg	Leu	Leu	Gly	Gln	Ser	Ala	Ala	Ser
145					150					155					160

Cys	His	His	Ala	Tyr	Ile	Val	Leu	Cys	Ile	Glu	Asn	Ser	Phe	Met	Thr
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Ala Ser

<210> 12

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 12

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Trp	Ser	Pro	Phe	Leu	Leu	Glu	Asp	Lys	Cys
			20					25	